Staff Summary
Method 2B Application
Consolidated Biofuels, Ltd.
Used Cooking Oil to Biodiesel Pathway
(Pathway Code: BIOD029)

Deemed Complete Date: March 30, 2015
Posted for Comment Date: May 28, 2015
Certified Date: June 8, 2015

Pathway Summary

Consolidated Biofuels uses used cooking oil (cooked) to produce biodiesel (BD) at its Delta, British Columbia plant. The company has applied for a Low Carbon Fuel Standard (LCFS) Method 2B pathway for the fuel produced in this plant. The plant uses a standard Fatty Acid Methyl Esters (FAME) transesterification process to produce biodiesel and has a production capacity of three million gallons per year.

The biodiesel plant is co-located with a coatings manufacturing facility. The two facilities share a common meter. To determine the energy usage related to the biodiesel production, Consolidated Biofuels used a third-party consultant. Based on the results of the audit report, 79.98 percent of natural gas and 67.07 percent of electricity was consumed for biodiesel production.

The biodiesel plant is designed to only handle used cooking oil (UCO) with free fatty acids (FFA) up to 10 percent by volume.

Consolidated Biofuels left most of the default input parameters unchanged in its CA-GREET analysis. Only the BD production energy consumption, the electrical generation energy mix, and the transportation distance parameters were changed.

Carbon Intensity of the Fuel Produced

The LCFS lookup table currently contains no pathway covering BD produced from UCO in this region of Canada. Therefore, the Consolidated Biofuel pathway falls under the Method 2B provisions of the LCFS. Because Consolidated Biofuel's application was submitted under the Method 2B process, it is not subject to the substantiality requirements with which Method 2A applications must comply (a minimum improvement of five gCO_2e/MJ, and a minimum production volume of ten million gallons per year).

The proposed Consolidated Biofuels pathway CI is shown in the following table.

Proposed Lookup Table Entry

Fuel	Pathway Identifier	Pathway Description	Carbon Intensity in gCO_2e/MJ		
			Direct Emissions	Land Use or other Indirect Effects	Total
Biodiesel	BIOD029	2B Application*: North American low-free fatty acids (Used Cooking Oil) where "cooking" is required; Biodiesel Produced in Canada	21.34	0	21.34

*Specific Conditions Apply

Operating Conditions

Operations at the plant will be subject to the following conditions designed to ensure that the CI of the of the BD produced at the Consolidated Biofuels plant will remain at or below the value appearing in the table above for all volumes of BD sold in California:

1) Except for periods of abnormal operations, such as planned maintenance or unpredictable, unavoidable, and uncontrollable *force majeure* events, the total thermal and electrical energy use values specified in the Consolidated Biofuels application shall not be exceeded.
2) All gallons produced under all certified LCFS Method 2 pathways shall inherit the same CI increment from the consumption of process energy at the plant. The applicants may not allocate process energy CIs so as to reduce the total life cycle CI of some subset of the gallons produced (e.g., those being shipped to California) and increase the CI of the remaining gallons. An example of such a reallocation would be associating California-bound gallons with the consumption of biogas and non-California-bound gallons with the consumption of natural gas.
3) Consolidate Biofuels will only utilized UCO that contains a maximum of 10 percent FFA by volume to produce the fuel it intends to sell using this pathway.

Staff Analysis and Recommendation

Staff has reviewed Consolidated Biofuel's Method 2B application, and finds the following:

- Staff has replicated, using the CA-GREET spreadsheet, the carbon intensity values calculated by the applicant; and
- Staff has concluded that the plant's actual energy consumption is not likely to exceed the energy consumption levels specified in Consolidated Biofuel's Method 2B application.

On the basis of these findings, staff recommends that Consolidated Biofuel's application for a Method 2B pathway be approved.